



THE EFFECT OF SEARCH ENGINE OPTIMIZATION ON EGYPTIAN CONSUMER RESPONSE

Adel M. Torieh 

Professor of Marketing, Ain Shams University, Egypt

atorieh@gmail.com

Norhan Hassan ELGendy

MBA Researcher, Suez Canal University, Egypt

noragendy0@gmail.com

Abstract

This study sought to identify the effect of search engine optimization (SEO) on consumer response. The three research questions guided the study are: Does a significant positive relationship exist between optimize search engine and consumer response according to age? Does a significant positive relationship exist between optimize search engine and consumer response according to gender? Does a significant positive relationship exist between optimize search engine and consumer response according to educational level? For this, a descriptive study was conducted. The target simple for the study was consumers according to their age, gender and educational level. A sample of 158 consumers was selected. The survey was contribute electronic by email and social media platforms. In addition to the descriptive statistics as frequency ,mean, standard deviation and coefficient of variation , a confirmatory factor analysis and multiple regression analysis were utilized to test the three main proposed hypotheses. The results showed that there is a fundamental difference for customer in search engine optimization according to customer's gender. While there is not a fundamental difference for customer in search engine optimization according to customer's age, finally, the results show there is a fundamental difference for customer in search engine optimization according to customer's educational level.

Keywords: Consumer response, Digital Marketing, Online Advertisement, Search engine optimization, Website



INTRODUCTION

In today's technology, the role of internet is rapidly increasing and will continue to do so in the future. In this rapid increase, the right data access and integration has become a challenge. According to reach local's survey since 93% of internet traffic is managed by search engines. Consumers use online search engines as tools to search for information on the World Wide Web (WWW). Examples of popular search engines include Google, Yahoo, and Bing... in many countries worldwide; Yandex in Russia; Baidu in China, Daum in Korea, but Google's acquires 90% of searches worldwide When a user searches using a keyword on a search engine.

Search Engine Optimization (**SEO**) is an Internet marketing strategy and a widely used process for improving the volume and quality of customer traffic to a company website through search engines, many companies are paying huge amount of money to search engines. The online search engines are best way to find the information about anything as it shows millions of results for a word or bunch of words. Successful **SEO** can be accomplished either by making a website more relevant for Consumers or by investing in techniques that only affect the website's ranking without providing higher-quality content .**SEO** constitutes a variety of strategies that, combined, boost a website, blog post, or online article high in search engine rankings. Individuals and businesses value these high rankings because it is important that their websites are among the first few that appear when a consumer searches for a product, a service, an event, or another item related to the company. It is important to be high in the rankings because, if not, potential customers or connections may never view the company's site and purchase its products or learn about its services. In fact, multiple studies demonstrate that web searchers rarely choose to go past the first page of Google results (Van Deursen & Van Dijk, 2009) and that sites ranked in the top three organic positions actually receive 58.4% of all user clicks (Goodwin, 2011). Organic positions refer to obtaining high results naturally through **SEO** tactics versus through search engine marketing (**SEM**), which instead refers to gaining traffic by purchasing ads on search engines (Janda , 2018).

Also the metrics of search engine optimization improves the website's quality and thus increases visitor satisfaction, these metrics divided to theoretical metrics and technical metrics, these metrics effect also on consumer response.

Consumers use search engines to learn about brand and product information, to dig out professional and consumer reviews, to discover deals and coupons, to compare prices, to link to brand or retailing websites, to find store locations and to do just about everything that needs to be done to complete a purchase. Above all this is the fact that search engines have become a key way to acquire information.

Research Problem & Questions

This study designed to focus on the impact of search engine optimization on consumer response. So the study considers the following questions:

- 1- Does a significant positive relationship exist between optimize search engine and consumer response according to age?
- 2- Does a significant positive relationship exist between optimize search engine and consumer response according to gender?
- 3- Does a significant positive relationship exist between optimize search engine and consumer response according to educational level?

Research Objectives

The main focus of this research devoted to:

- Anticipate the influence of search engine optimization on consumer response according to (age / gender / educational level).
- Explore the theoretical metrics of search engine and their effect on website and consumer response.
- Identify and test the metrics of search engine on consumer response.

Research Hypotheses

H1: there is a fundamental difference for customer in search engine optimization according to customer's age.

H2: there is a fundamental difference for customer in search engine optimization according to customer's gender.

H3: there is a fundamental difference for customer in search engine optimization according to customer's educational level.

The Importance of Research

There are two aspects for this study theoretical and practical, in theoretical side the importance become from there is no one discussed the theoretical metrics and the effect on consumer response all articles discussed the technical metrics and the effect on company website or discuss the point of views of the marketer, so we provide information on this side.

In practical side: the researchers discuss the effect of search engine optimization on consumer response according to consumer's point of view because there are a scarcity of information on this side.

LITERATURE REVIEW

(Charunya Parnchaoren, 2019) . Titled “Consumer response to online advertisement of generation Z in Bangkok”. This study aims to investigate the consumer response to the online advertising of Generation Z in Bangkok and to compare the consumer response to the online advertising of Generation Z in Bangkok classified by individual attributes. The samples used in this study were 394 online consumers who were born after 1995 and lived in Bangkok. The questionnaires were used as the tool to collect the data. Statistics used to analyze the data were descriptive statistics, including percentage, frequency distribution, mean, and standard deviation. The results show the most important element of online advertising that can create awareness of products (Aware) is having advertising via Facebook. The most important element of online advertising that can attract the consumers (Appeal) is showing the prominent feature of products/services in the advertising. It is also found that the most important element of online advertising that can response to the inquiry of consumer (Ask) is optimizing Google search so that can be easily search more information regarding products/services in Google.

(Boonchai Hongcharu, 2019) . Titled “Effects of Message Variation and Communication Tools Choices on Consumer Response”. This study uses the advertising, sales promotion and public relations messages of a retail outlet, to study the effects of two different types of message variation: cosmetic and substantive and three choices of communication tools on consumer response on the messages and on the brand. An experiment of 198 subjects under six conditions reveals significant main effects and an interaction for consumer response on the messages. However, only message variation significantly affects consumer response on the brand. Customers generally seek for the types of messages and communication tools that can increase the amount of information and perceived value to make an informed purchase decision. The results from this study have shed some lights for marketers to plan their marketing communication budget as IMCs often take time and resources to build brand image in the mind of the consumers (Banerjee & Siddhanta, 2015). Communication tools choices and message variations are significant factors for overall consumer response on the messages, credibility and familiarity. Sales promotion with cosmetic or substantive message variation provides better results as it fits the products type in this study. Sales promotion increases the cognitive brand experience through a large amount of savings, increasing the overall brand value (Bapat & Thanigan, 2016). From the findings of this study on consumer response on the brand, substantive message variation is more effective than the cosmetic one for the affective and behavioral responses as consumers value a large variety of information, bringing more insights and experiences to their purchasing decisions especially when the messages are not too difficult to understand.

(Ravneet & Ajay, 2018) . Titled “The impact of Search Engine Optimization as a Marketing Tools” In this study, the authors have attempted to comprehend and understand empirically. The data were gathered through questionnaire from the sample of 338 respondents who were selected by simple random sampling method mostly from the National Capital Region (NCR) of Delhi in India. The findings of this study improve the understanding of impact of SEO on various marketing parameters and can be used to assist marketers in developing appropriate and effective strategies accordingly. The empirical results reveal that SEO has the most prominent advantages in increasing market share, enhance brand equity of the product followed by other factors, that is, product awareness, purchase persuasion, and consumer insight. The findings indicate that marketers should pay particular attention to SEO as it can have a long-lasting effect on multiple marketing variables.

(Matthew Chesnes, Weijia (Daisy) Dai, et al., 2018) . Titled “banning foreign pharmacies from sponsored search: the online consumer response”. This article discussed Increased competition from the internet has raised concerns about the quality of prescription drugs sold online. Given the pressure from the Department of Justice, Google agreed to ban pharmacies not certified by the National Association of Boards of Pharmacy (NABP) from Sponsored search listings. Using comScore click-through data originated from health-related queries, they study how the ban affects consumer search and click behavior in a difference-indifferences framework using the synthetic control method. They find that non-NABP-certified pharmacies receive fewer clicks after the ban and this effect is heterogeneous. In particular, pharmacies not certified by the NABP, but certified by other sources (other-certified websites), experience an increase in organic clicks that partially offsets the loss in paid clicks after the ban. They conclude that the ban has increased search cost for tier-B websites, but at least some consumers overcome the search cost by switching from paid to organic links. In addition to search cost, while we do not observe the quality of drugs purchased on pharmacies in each tier, our results suggest that the ban may have increased health concerns for tier-C websites and discouraged consumers from reaching them via organic links. It is also possible that tier-C websites are buried deeper in organic results than tier-B websites, and the extra obscurity adds difficulty for consumers to switch to organic links for tier-C websites. However, this explanation cannot fully explain the differential organic substitution effect for tier-B websites. After the ban and the Google-DOJ settlement, consumers searched more for online pharmacy certification and tier-B websites enjoyed positive organic substitution even compared to websites with similar organic visibility. The organic substitution for tier-B websites is strongest following queries that target discount pharmacies.

(N.Nithya, 2018) . Titled “Analyze the Digital Marketing Techniques in Search Engine Optimization. This paper discussed about digital marketing and its types of techniques. Digital marketing across multiple channels offers marketers valuable insights into target audience behaviors, in addition to a myriad of opportunities for consumer engagement. Customers are a businesses’ most important asset; every step of their journey, from discovery through conversion and advocacy, should be monitored and facilitated by the company. The success of campaign strategies depend on metrics compiled over time across digital platforms. Digital marketing across multiple channels offers marketers valuable insights into target audience behaviors, in addition to a myriad of opportunities for consumer engagement. Customers are a businesses’ most important asset; every step of their journey, from discovery through conversion and advocacy, should be monitored and facilitated by the company. The success of campaign strategies depend on metrics compiled over time across digital platforms. Engagement and digital marketing go hand-in-hand, and businesses can use the tools outlined here to stay one step ahead of their customers, moving above and beyond the competition.

(MARK JEFFERY.2017) . Titled “Air France Internet Marketing: Optimizing Google, Yahoo!, MSN, and Kayak Sponsored Search”. This report discussed Air France’s revenue from online ticket sales continues to grow. The reports demonstrate Media Contacts’ success at driving a growing volume of visitors to Air France–affiliated Web sites. As they continue to make decisions regarding allocation of funds toward search marketing, the team is eager to focus their analytic marketing expertise on increasing Air France’s net revenue gained through online advertising as well as ROA. As you know, the cost-per-click of search engine keywords is continuing to increase and there are more new players entering the market. Jeffery would like to see their campaigns be even more efficient at driving visitors to Web sites and converting them to customers while keeping click costs minimized. The Media Contacts team had only a short time to make sense of all of its research and determine a way to optimize future campaigns. Although it appeared that using branded keywords might bring in more revenue, it was also apparent that unbranded keywords produced a larger percentage of single-click conversions. Which approach would have a higher propensity to increase ticket sales and to improve ROA? Furthermore, Media Contacts had to determine whether broad or focused keywords were more profitable for Air France. Although broad keywords occupied the majority of searches, were they as profitable as focused keywords? How could Media Contacts use assist keywords to lead consumers to a desired behavior? Note that typical Internet tracking worked by measuring the last keyword clicked, and this keyword was credited for the sale/conversion. The team’s research therefore extended well beyond the examination of numerical data; it had to think about consumer behavior, considering how many searches it might take for someone to

convert. Each search engine that Air France was working with in July 2007—Google, Yahoo, MSN, and Kayak—appeared to specialize in different services and consequently might appeal to different audiences. Media Contacts needed to decide which search engine(s) delivered the most value to Air France per dollar spent. They also needed to be mindful of whether any search engines were partnered with travel aggregators, as this could create a potential conflict of interest for Air France. Media Contacts could use DoubleClick data to analyze past performance and make recommendations for strategy optimization. The data included line item information for keywords and keyword groups for each campaign and search engine (Exhibit 6). To make sense of this information, it would need to be grouped and analyzed using Microsoft Excel’s pivot table feature. Using pivot tables to show different summaries of data, the Media Contacts team could analyze campaign key performance indicators (KPI) by search engine, bid strategy, keyword group, keywords, and so on.

(Kaveh Peighambari, Setayesh Sattari et al., 2016). Titled “Consumer Behavior Research: A Synthesis of the Recent Literature” The purpose of this article is, therefore, to cover 12 years (1998-2009) of literature to investigate consumer behavior growth as a research topic in the literature. The objective of this article to categorize and evaluate trends of consumer behavior published in the five leading international journals in this field. The findings of this study highlight the most important consumer behavior topics and the most influential articles in the field based on citation frequency. The number of topics studied in consumer behavior showed a dramatic growth and revealed some general patterns during the 12 years studied in this article In comparison with the study done by Helgeson et al. in 1984, there has been tremendous growth in the use of complex statistical techniques such as SEM. This may be due to the fact that these techniques involve advanced computer software and packages that did not exist in 1984. It may also be the result of an increase in the number of consumer behavior articles that conducted scientific hypothesis testing generated from a theory base. According to the results, authors aiming to have an article published in a journal will have a better understanding of the different trends consumer behavior research has had during the studied period. Moreover, potential Authors, researchers, and interested readers may use the information presented as a means to assess the field.

(Michael R. Baye, Babur De Los Santos & Matthijs R. Wildenbeest, 2016) . Titled “Search Engine Optimization: What Drives Organic Traffic to Retail Sites?” the goal of this research is to analyze the drivers of organic traffic following product searches, we restrict our sample to only include web sites that are Internet retailers. For this we make use of Internet Retailer’s Top 500 Guide, which contains a ranking of North America’s 500 largest

e-retailers based on annual Web sales. This research find that a retailer's investments in factors such as the quality and brand awareness of its site increases organic clicks through both a direct and an indirect effect. The direct effect stems purely from consumer behavior: The higher the quality of an online retailer, the greater the number of consumers who click its link rather than a competitor in the list of organic results. The indirect effect stems from our finding that search engines tend to place higher quality sites in better positions. Also find that consumers who are older, wealthier, conduct searches from work, use fewer words, or include a brand name product in their search are more likely to click a retailer's organic link following a product search. Finally, the quality of a retailer's site appears to be especially important in attracting organic traffic from individuals with higher incomes. The beneficial direct and indirect effects of an online retailer's brand equity on organic clicks.

(Jing Zhang, En Mao.2016) . Titled "From Online Motivations to Ad Clicks and to Behavioral Intentions: An Empirical Study of Consumer Response to Social Media Advertising". This study aims to develop an understanding of how consumer online motivations (connection vs. consumption) lead to ad clicks on social media, which in turn affect behavioral intentions. A research model is developed to delineate two processes: First, the effects of motivations on ad clicks via perceived entertainment and informativeness values of ads, in which the mediating role of perceived congruity between ad and media content is proposed, too; second, the effect of ad clicks on behavioral intentions to purchase and spread positive word of mouth. The model was tested and confirmed with the online survey data of 613 social media users. The results show that our research model explains 44.3% of the variance in ad clicking behavior. Ad clicks then affects consumers' product evaluations, explaining 47.0% of the variance in product evaluations. And finally, product evaluations influence purchase intention and intention to spread positive WOM, explaining 46.8% of the variance in purchase intention and 53.2% in WOM. These results validate the explanatory power of the model in studying social media advertising. In addition, the first part of the model showed that consumers' ad clicking behavior is driven by two primary social media motivations or through two different routes. First, consumption or shopping motivations "prepare" consumers to see ads on social media, thus enhancing their perceived informativeness and entertainment values of ads they view on social media. Both perceived informativeness and entertainment values then lead to ad clicks. Second, the effect of connection motivations on perceived informativeness and entertainment is mediated through ad-media congruity.

(Hamza Salim Khraim, 2015) . Titled "The Impact of Search Engine Optimization on Online Advertisement: The Case of Companies using E-Marketing in Jordan" This research

aims to explore the importance and benefits of SEO in E-marketing as well as to examine the impact of SEO on online advertisement. A questionnaire was distributed personally on 121 companies utilizing E-marketing in Jordan. Factor Analysis provided four dimensions which were used later in Multiple Regression. Those factors were named as; SEO strategies, SEO competitiveness, SEO experience and SEO techniques. Results show that SEO strategies were not significant, while the remaining three dimensions were all significant.

RESEARCH METHODOLOGY

Research Design and Approach

This study was a descriptive cross-sectional research that utilized a survey to collect data .the major purpose of descriptive research is to describe characteristics of population or phenomenon. There are several methods used in analyzing data such as: qualitative, quantitative and mixed methods. And used quantitative method based on available data and information.

Measurement

Study first used Kolmogorov-Smirnov and Shapiro-Wilk but they are less than 0.05, so we must use the following Non-Parametric methods of statistics:

- Mann Whitney U Test between two groups, like Gender.
- Kruskal-Wallis Test between three groups, and if the significance is significant then only use Mann Whitney U Test between every two groups to indicate which two groups are significant.

Data Collection Methods

The instrument used in this research is questionnaire (5 Scale degree) which was designed specifically for this study. Questionnaire individual to two section first one related to consumer according age, gender and educational level. Second section was related search engine optimization according to website speed, User experience (UX), website design.

Data Analysis Approach

The researcher used descriptive statistics as frequency, mean, standard deviation and Coefficient of variation, a confirmatory factor analysis and multiple regression analysis to test the three main proposed hypothesis.

ANALYSIS AND RESULTS

Tests of Normality for The effect of search engine optimization on consumer response by demographic characteristics indicated that Kolmogorov-Smirnov and Shapiro-Wilk are less than 0.05, so we must use the following Non-Parametric methods of statistics:

- 1- Mann Whitney U Test between two groups, like Gender.
- 2- Kruskal-Wallis Test between three groups, and if the significance is significant then only use Mann Whitney U Test between every two groups to indicate which two groups are significant.

Descriptive Statistics

Table (1) Descriptive Statistics for The effect of search engine optimization on consumer response and demographic characteristics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	158	1	2	1.59	.492
Age	158	1	3	1.98	.287
Educational Level	158	1	3	2.22	.446
The effect of search engine optimization on consumer response	158	45	75	61.49	5.410

Table (1) indicates that sample includes 158 from every demographic characteristic (age, gender, educational level), and the mean of this effect (61.49 comparing to Maximum 75) means above average effect.

Hypotheses Test

Hypothesis 1:

Table (2) The effect of search engine optimization on consumer response According to customer's gender by Mann Whitney U Test

Gender	N	Mean Rank	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Sig.
Males	64	89.62	2360	6825	-2.303	0.021	Significant
x Females	94	72.61					
Total	158						

Table (2) indicates that Mean Ranks between Males and Females are not equal, and Significance is less than 0.05, so the differences are Significant between them in favor of the largest Mean Rank among Males. Therefore, the researcher accepts the first hypothesis.

H1: there is a fundamental difference for customer in search engine optimization according to customer's gender.

Hypothesis 2:

Table (3) The effect of search engine optimization on consumer response
According to customer's age by Kruskal-Wallis Test

Age	N	Mean Rank	Chi-Square	df	Asymp. Sig.	Sig.
Under 21	8	102.00	2.0890471	2	0.352	Not Significant
21 to 40	145	78.43				
Furthermore	5	74.40				
Total	158					

Table (3) indicates that Mean Ranks between Under 21, from 21 to 40, and furthermore are equal, and Significance is Greater than 0.05, so the differences are Not Significant between them. Therefore, the researcher does not accept the second hypothesis.

H2: there is not a fundamental difference for customer in search engine optimization according to customer's age.

Hypothesis 3:

Table (4) The effect of search engine optimization on consumer response
According to customer's educational level by Kruskal-Wallis Test

Educational Level	N	Mean Rank	Chi-Square	df	Asymp. Sig.	Sig.
Secondary and equivalent or less	2	84.50	9.1184549	2	0.010	Significant
Initial university degree	119	85.58				
Postgraduate	37	59.69				
Total	158					

Table (4) indicates that Mean Ranks between Secondary and equivalent or less, Initial university degree, and Postgraduate are not equal, and Significance is less than 0.05, so the differences are Significant between them.

The following is Mann Whitney U Test only between Initial university degree and Postgraduate, because the remaining groups are equal Mean Ranks and have Not Significant differences between their Mean Ranks.

Table (5) The effect of search engine optimization on consumer response
According to customer's educational level by Mann Whitney U Test

	Educational Level	N	Mean Rank	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Sig.
x	Initial university degree	119	84.56	1480.5	2183.5	-3.01	0.0026	Significant
	Postgraduate	37	59.01					
	Total	156						

Table (5) indicates that Mean Ranks only between Initial university degree and Postgraduate which are not equal, and which has Significance less than 0.05, so the differences are Significant between them in favor of the largest Mean Rank among Initial university degree. Therefore, the researcher accepts the third hypothesis.

H3: there is a fundamental difference for customer in search engine optimization according to customer's educational level.

CONCLUSION

This study sought to identify the effect of search engine optimization (SEO) on consumer response. The target simple for the study was consumers according to their age, gender and educational level. A sample of 158 consumers was selected. The survey was contribute electronic by email and social media platforms. In addition to the descriptive statistics as frequency ,mean, standard deviation and coefficient of variation, a confirmatory factor analysis and multiple regression analysis were utilized to test the three main proposed hypotheses. Based on the findings, following conclusions were drawn on hypotheses:

- The first research hypothesis tackling the existence of fundamental difference for Customer in search engine optimization according to customer's gender, and the Researcher accepts this hypothesis.

- The second research hypothesis tackling there is not a fundamental difference for Customer in search engine optimization according to customer's age, and the Researcher doesn't accept this hypothesis.
- The third research hypothesis tackling the existence of fundamental difference for Customer in search engine optimization according to customer's educational level, And the researcher accepts this hypothesis.

Limitations and Future Directions

Limitations:

- According to Covid-19 circumstances, primary data collected by electronic way through the internet.
- The Study focused on "un elder "only, No elder users segment, according to using internet capabilities. Thus restricting generalizability of the current findings.

Future Directions:

- Using internet engine by elder during Covid-19 pandemic.
- Comparing studying results between Egyptians elder and other nationalities like Saudi elder.

REFERENCES

- Al-Badi, A. H., Al Majeeni, A. O., Mayhew, P. J., & Al-Rashdi, A. S. (2011). Improving website ranking through search engine optimization. *Journal of Internet and e-business Studies*, 2011, 1-11.
- Bai, X. (2013). In Google We Trust: consumers' perception of search engine optimization and its potential impact on online information search.
- Baye, M. R., De los Santos, B., & Wildenbeest, M. R. (2016). Search engine optimization: what drives organic traffic to retail sites? *Journal of Economics & Management Strategy*, 25(1), 6-31.
- Berman, R., & Katona, Z. (2013). The role of search engine optimization in search marketing. *Marketing Science*, 32(4), 644-651.
- Berman, R., & Katona, Z. (2020). The Role of Search Engine Optimization in Search Marketing. *Marketing Science*, 32(4).
- Bhandari, R. S., & Bansal, A. (2018). Impact of search engine optimization as a marketing tool. *Jindal Journal of Business Research*, 7(1), 23-36.
- Bhandari, R. S., & Bansal, S. (2019). An Analysis between Search Engine Optimization Versus Social Media Marketing Affecting Individual Marketer's Decision-Making Behavior. *Jindal Journal of Business Research*, 8(1), 78-91.
- Charunya Parnchaoren. (2019). CONSUMER RESPONSE TO ONLINE ADVERTISING OF GENERATION Z IN BANGKOK .*SUTHIPARTITHAT*, 33(107), 1-12.
- Chen, C. Y., Shih, B. Y., Chen, Z. S., & Chen, T. H. (2011). The exploration of internet marketing strategy by search engine optimization: A critical review and comparison. *African Journal of Business Management*, 5(12), 4644-4649.
- Cheng, M., & Anderson, C. K. (2020). Search Engine Consumer Journeys: Exploring and Segmenting Click-Through Behaviors. *Cornell Hospitality Quarterly*, 1938965520924649.

- Cheng, M., & Anderson, C. K. (2020). Search Engine Consumer Journeys: Exploring and Segmenting Click-Through Behaviors. *Cornell Hospitality Quarterly*, 1938965520924649.
- Cheng, M., Anderson, C. K., Zhu, Z., & Choi, S. C. (2018). Service online search ads: from a consumer journey view. *Journal of Services Marketing*.
- Chesnes, M., Dai, W., & Zhe Jin, G. (2017). Banning foreign pharmacies from sponsored search: The online consumer response. *Marketing Science*, 36(6), 879-907.
- Dayanand, A. S. (2020). Optimization of Online Advertising on Search Engines (Doctoral dissertation, State University of New York at Buffalo).
- Egri, G., & Bayrak, C. (2014). The role of search engine optimization on keeping the user on the site. *Procedia Computer Science*, 36, 335-342.
- Giromelakis, D., & Veglis, A. (2016). Investigating search engine optimization factors in media websites: The case of Greece. *Digital journalism*, 4(3), 379-400.
- Grauer, R. W. (2009). Consumer response relative to perishable food product store branding practices affecting manufacturer strategy. University of Phoenix.
- Hamdar, B., Aridi, E., & Mroueh, R. (2018). The economics of search engine visibility and its relation to brand perception: implications for Lebanese consumers. *International Journal of Economics, Commerce and Management*, 6(4), 585-606.
- Hongcharu, B. (2019). Effects of Message Variation and Communication Tools Choices on Consumer Response. *Global Business Review*, 20(1), 42-56.
- Hoque, M., Alsadoon, A., Maag, A., Prasad, P. W. C., & Elchouemi, A. (2018). Comprehensive Search Engine Optimization Model for Commercial Websites: Surgeon's Website in Sydney. *Journal of Software*, 13(1), 43-57.
- Iredale, S., & Heinze, A. (2016, September). Ethics and professional intimacy within the search engine optimisation (SEO) industry. In *IFIP international conference on human choice and computers* (pp. 106-115). Springer, Cham.
- Jain, A. (2013). The Role and Importance of Search Engine and Search Engine Optimization. *International Journal of emerging trends & technology in computer science*, 2(3), 99-102.
- Jeffery, M., Egli, L., Gieraltowski, A., Lambert, J., Miller, J., Neely, L., & Sharma, R. (2017). Air France internet marketing: optimizing Google, Yahoo!, MSN, and Kayak sponsored search. *Kellogg School of Management Cases*.
- Jerath, K., Ma, L., & Park, Y. H. (2014). Consumer click behavior at a search engine: The role of keyword popularity. *Journal of Marketing Research*, 51(4), 480-486.
- Khraim, H. S. (2015). The impact of search engine optimization on online advertisement: The case of companies using E-Marketing in Jordan. *American Journal of Business and Management*, 4(2), 76-84.
- Kritzinger, W. T., & Weideman, M. (2013). Search engine optimization and pay-per-click marketing strategies. *Journal of Organizational Computing and Electronic Commerce*, 23(3), 273-286.
- Ledford, J. L. (2015). *Search engine optimization bible* (Vol. 584). John Wiley & Sons.
- Nithya, N. (2018). Analyze the digital marketing techniques in search engine optimization. *IJRAR-International Journal of Research and Analytical Reviews* (IJRAR), 5(3), 67-74.
- Pan, B., Xiang, Z., Law, R., & Fesenmaier, D. R. (2011). The dynamics of search engine marketing for tourist destinations. *Journal of Travel Research*, 50(4), 365-377.
- Peighambari, K., Sattari, S., Kordestani, A., & Oghazi, P. (2016). Consumer behavior research: a synthesis of the recent literature. *Stage Open*, 6(2), 2158244016645638.
- Seo, W. J. (2010). Understanding the impact of visual image and communication style on consumers' response to sport advertising and brand: A cross-cultural comparison. The University of Texas at Austin.
- Sheffield, J. P. (2020). Search Engine Optimization and Business Communication Instruction: Interviews with Experts. *Business and Professional Communication Quarterly*, 83(2), 153-183.
- Shih, B. Y., Chen, C. Y., & Chen, Z. S. (2013). Retracted: an empirical study of an internet marketing strategy for search engine optimization. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 23(6), 528-540.
- Spais, G. (2010). Search Engine Optimization (SEO) as a dynamic online promotion technique: the implications of activity theory for promotion managers. *Innovative Marketing*, 6(1), 7-24.
- Stephen, A. T. (2016). The role of digital and social media marketing in consumer behavior. *Current opinion in Psychology*, 10, 17-21.

Vignesh, J. Deepa. V.(2014). Search Engine Optimization to Increase Website Visibility. International Journal of Science and Research, 3(2), 425-430.

Zhang, J., & Mao, E. (2016). From online motivations to ad clicks and to behavioral intentions: An empirical study of consumer response to social media advertising. Psychology & Marketing, 33(3), 155-164.

Zhang, S., & Cabage, N. (2017). Search engine optimization: Comparison of link building and social sharing. Journal of Computer Information Systems, 57(2), 148-159.